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NEW CROP VARIETIES - NO. 5

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Outlined here are descriptions of new varieties of certain field crops. The purpose is to provide the extension worker with information for his use until fuller descriptions appear as in USDA Technical Bulletins or in the Registration Service of the American Society of Agronomy.

Assembled by FES with the cooperation of
State Extension Agronomists and ARS-USDA

Varieties Described

WHEAT	SOYBEANS	BERMUDAGRASS
Crim	Clark 63	Tufcote
Reed	Harosoy 63	Arizona Common
Knox 62	Hawkeye 63	
Lancer	Lindarin 63	TALL FESCUE
Scout	Hardee	Kenmont
Gage	Delmar	
	Bossier	LOWLAND SWITCHGRASS
OATS	Curtis	Kanlow
Fairfax		
Lodi	ALFALFA	RESCUEGRASS
Ortley	Progress	Gasel
Neal	WL 202	
Clintland 64	Sonora	VELDTGRASS
	Cayuga	Mission
BARLEY	Cherokee	
Pennrad	525	BLUESTEM
Harrison		Champ
Vale	WHITE CLOVER	Pawnee
Dover	Regal	
Grande	Espanso	SUDANGRASS
Early Marconee		Suhi-1
Will	SWEET CLOVER	
Besbar	Cumino	FIELD BEANS
		Charlevolx
RICE	ARROWLEAF CLOVER	Gratiot
Palmyra	Amclo	Red Mexican UI-36
Nova		Red Mexican UI-37
Vegold	RED CLOVER	
	Orbit	MUNGBEAN
GRAIN SORGHUMS	Tensas	Berken
RS 617		
AKS 614	LESPEDeza	SESAME
RS 616	Summit	Calinda
RS 621		
RS 622	SERECIA LESPEDeza	CASTORBEAN
RS 623	Serala	Lynn
	Gasyn	
		PEANUTS
		Starr
		LUPINE
		Weiko III

Any inquiry about a variety described here should be directed to the State releasing it.

Wheat

Crim is a bearded hard red spring wheat with a new type of stem rust resistance, developed cooperatively by the Minnesota Experiment Station and USDA. Some 900 bushels of foundation seed, increased with the help of the North Dakota and South Dakota stations, were distributed this year for multiplication. The variety was named for the late Ralph F. Crim, long-time extension agronomist in Minnesota. In tests from 1960-62, yields of Crim ranked second to third high among all spring wheats compared. It showed good resistance to stem rust, is moderately susceptible to leaf rust and loose smut, and is about equal to Lee in straw strength. In Minnesota, it corresponds to Selkirk in yield, maturity and area of adaptation and it rated about 2 pounds heavier in test weight. Field testing is being extended to spring wheat areas of seven nearby States and Canada. Milling and baking characteristics have been satisfactory in experimental trials.

Reed is a medium season, Hessian fly-resistant soft winter wheat developed cooperatively by Purdue Experiment Station and USDA as a replacement for Dual. The variety was named in honor of the late Dean Harry J. Reed of Purdue. Reed is similar to Dual in maturity and height (intermediate). It is outstanding in straw strength and erectness, comparing with Redcoat in this respect. Holding the highest over-state yield record, Reed is recommended throughout Indiana where it is expected to replace much of the acreage in Dual. Its test weight has been superior, quality excellent and it offers resistance to shattering. Reed is resistant to leaf rust and to soil-borne mosaic in Indiana soils. It is moderately resistant to Septoria leaf blotch, but moderately susceptible to stem rust, powdery mildew and loose smut. In Hessian fly resistance it is similar to Dual, Monon and Redcoat.

Knox 62 is a soft red winter wheat developed by the Purdue Experiment Station in cooperation with USDA as a Hessian fly-resistant replacement for the Knox variety. In this respect it is outstanding. Otherwise, Knox 62 is very similar to Knox in maturity, height, standing ability, yield and winterhardiness. Like Knox, the grain of Knox 62 is excellent in test weight and commercial quality. The two varieties are similar in resistance to leaf rust, powdery mildew and to soil-borne mosaic virus disease. Both are susceptible to leaf and head Septoria diseases and stem rust. However, its early maturity helps Knox 62 escape stem rust infection. Replacement of Knox, the leading variety in the Eastern soft red winter wheat region, with Knox 62 is strongly indicated.

Wheat (cont.)

Three new wheats to be available in 1964, developed cooperatively with USDA, are announced by The Nebraska Experiment Station:

Lancer is a winterhardy, highly productive variety with medium height and good straw. It is similar to Warrior in earliness of maturity and resembles Cheyenne in field appearance. Lancer has strong gluten baking characteristics similar to Warrior and Bison. During the 1959-62 testing period this new variety had low field infections of stem rust but it is susceptible to leaf rust, loose smut and bunt. Lancer will be recommended for all of Nebraska except the Southeast and south central areas.

Scout is a variety which approaches Wichita in earliness. It had low field infections of stem rust during the 1959-62 testing period; has some Hessian fly resistance and considerable tolerance to wheat streak mosaic. This new variety is moderately winter hardy with fair straw strength. It is highly productive under a wide range of conditions. It is a medium strong gluten variety with baking quality similar to Bison. Scout will be recommended for the Southwest and south central areas of Nebraska.

Gage has a short stiff straw and winterhardiness similar to Ponca. It had low field infections of stem and leaf rust during the 1959-62 period of testing. Gage is fairly resistant to soil borne mosaic, less resistant to Hessian fly than Ponca but more so than Pawnee. In recent tests it has outyielded Ottawa, Omaha and Pawnee. It is a mellow gluten variety with baking quality similar to Omaha and Ottawa. Gage is to be recommended in only the Southeast area of Nebraska.

Oats

Fairfax (C.I. 7417) is dual purpose winter oat released last fall by the Georgia Experiment Station. Its parentage is Arlington x Wintok x (Clinton²-Santa Fe)7. Medium late in maturity with good disease resistance, Fairfax is more winter hardy than many varieties but less hardy than Forkeddeer. High yield of both grain and forage is a distinguishing characteristic. In 4-Year trials at Experiment, Georgia, Fairfax averaged 119.3 bu. compared with Moregrain, 114.3; Suregrain 101.9; Arlington 89.3; Victorgrain 48-93, 88.9; and Sumter 118.5 (3 yr. av.). In forage tests (1960-62) Fairfax produced 7,371 lbs. dry forage compared with 5567 for Moregrain and 5185 lbs. for Arlington. Seed supplies are being increased in Georgia.

Lodi (C.I. 7561) is a spring oat released in 1963 by Wisconsin Experiment Station. Its parentage is Richland-Bond x (Garry x Hawkeye-Victoria). Tested throughout Wisconsin and in the North Central oat nurseries, main advantages of Lodi are its high yield and stiff straw. Though tall, it resists lodging as well as any other variety except Goodfield. Lodi, it's expected, will be adapted to a wide fertility range and because of its lodging resistance, especially to highly fertile soils. Its heading and ripening dates are similar to those of Garry. Its hull color is light yellow, but may turn a dull reddish yellow on weathering. The kernels are medium long and test weight is intermediate. In crown rust resistance Lodi resembles Dodge in recent years, but it may appear more susceptible if newer races rise to prevalence or if race 216 becomes intense early in the season. Lodi is resistant to smut and stem rust though again, some now prevalent races will attack it. Lodi is susceptible to "red leaf" disease. Its stem Septoria reaction appears to be about the same as Garry's and less than those of Goodfield, Dodge and Garland. This new variety is expected to replace some of the acreage of Ajax, Branch, Garry, Portage, Rodney and Sauk.

Ortley (C.I. 7473) is a spring oat developed by South Dakota Experiment Station by selection from a bulk of the cross Garry x (Santa Fe x R. L. 1942)7 x R. L. 2228. It is similar to Garry in plant type and about one day later. The straw is coarse at maturity and only fairly resistant to lodging. There will be a small percentage of off-type plants, taller than normal with awned kernels. The kernels are white, plump, blocky and the hull is thin. Expected area of adaptation is the high elevation land of northeastern South Dakota where lower temperatures prevail during the growing season. Ortley has shown greater tolerance of high summer temperatures and, in some cases, to leaf (crown) rust than presently recommended varieties of the same maturity class. It lacks resistance to oat smut; its resistance to stem rust is similar to that of Garry.

Oats (cont.)

Neal (C.I. 7440) is a spring oat released this season by the Nebraska Experiment Station. Its parentage is Nemaha x (Andrew x Landhafer) - thus the name Neal. It is an early maturing, short-strawed, lodging resistant variety. Neal has produced excellent yields in the Southern half of Nebraska, where it is recommended. It is resistant to several races of stem rust, partially resistant to crown rust and appears to have tolerance of yellow dwarf disease. The grain varies from ivory to buff in color and is suited to milling as well as feeding.

Clintland 64 is a spring oat developed at Purdue in cooperation with ARS. It is distinguished from Clintland and Clintland 60 by its high resistance to crown and stem rust. Like its predecessors, it is moderately susceptible to Septoria leaf blotch and very susceptible to barley yellow dwarf disease. The area of adaptation for Clintland 64 is the same as for Clinton 59, Clintland and Clintland 60 -- the north central States.

Barley

Pennrad is a mid-tall, awnleted (beardless) winter barley developed at the Pennsylvania Experiment Station, released for seed production in 1962. It is a selection from a mutant type that may have been caused by irradiating seed of the Hudson variety. Except for its awnleted character, Pennrad is similar to Hudson. It produces high yields and has exceptional winter-hardiness. For an awnleted barley, it is high in test weight, has good straw strength, and is resistant to scald and powdery mildew diseases but susceptible to net blotch and loose smut. Field observations indicate Pennrad will be much more dependable than Wong in grain production in central and northern Pennsylvania. It's expected that there will be adequate certified seed supplies for 1964 planting.

Harrison is a relatively short, awned, mid-season winter barley that offers a combination of improvements. It was developed by the Indiana Experiment Station in cooperation with ARS, USDA. Ohio, Michigan and Kentucky are cooperating in seed production to begin this fall. In Indiana, Harrison is rated exceptional for yield, test weight, straw strength (both pre-ripe and post-ripe), winterhardiness and disease resistance (except loose smut). It is resistant to leaf rust, powdery mildew, scald and net blotch (intermediate). In regional trials at 23 to 24 locations throughout northeastern and central U.S., Harrison has shown wide adaptation, ranking first of 31 varieties for yield in 1961 and third of 32 varieties in 1962. The variety resulted from a series of six crosses during the period 1928 to 1946, involving seven original parent varieties.

Barley (cont.)

Vale is a six-row, white aleurone, smooth awned, stiff strawed spring feed barley. It was developed by the Utah Experiment Station and ARS and was released by experiment stations in Utah and Oregon. Vale is classified as resistant to mildew but it is susceptible to loose smut and yellow dwarf virus. It is recommended as a replacement for Bonneville in the irrigated areas of the Snake River Valley.

Dover is an early bearded winter barley developed by the Ontario Project Group. It was licensed in 1962. Dover was selected from a cross of Kenate x Wong made in 1949 at Ontario Agricultural College. In comparison with Hudson, it has excelled in yield, straw strength and threshability. In general, its disease resistance is similar to that of Hudson but it is moderately susceptible to scald. In the Canadian Uniform Winter Barley Tests, grown at three Ontario stations, Dover outyielded Hudson 72.6 bushels to 63 in the period 1957-1961. It exhibited slightly higher winter survival and shorter straw. Canadian authorities regard Dover as being suited to the same sections of Ontario as Hudson.

Grande is a selection made in California from a composite of 28 varieties after it had been grown 20 years under competitive natural selection. This new variety is generally adapted to the Sacramento Valley in areas where Tennessee Winter has been used. It has shown promise also in much of the State where late rains or high soil moisture capacity allow production of a medium late variety. It appears to be especially well adapted for irrigation on clay textured soils, and its later maturity suits it to production in areas where spring frosts can be a problem.

Grande has larger heads and seeds than any other commercial variety grown in California. The heads drop at maturity, the awns are long and rough, the rachilla is long with short hairs, the kernels are deep blue in color. Plant height and lodging resistance are similar to Atlas 57. It has shown tolerance to powdery mildew, net blotch, and scald -- only Rojo is considered to have a better record of overall disease resistance. Grande is a feed barley that matures later than Atlas 57 but earlier than Tennessee Winter.

Early Marconee, a winter barley released by the South Carolina Experiment Station, differs from its parent variety chiefly in uniformity, earliness - by 2 to 3 days and in having higher test weight. In 3-year tests it has outyielded Marconee. The two varieties resemble in height, straw strength and disease reaction. Both are resistant to powdery mildew but susceptible to leaf rust, scald and loose smut. Foundation seed is available in limited quantity from the Foundation Seed Association at Clemson.

Barley (cont.)

Will (for Will Rogers) is a greenbug-tolerant, winterhardy, high-yielding barley just approved for release by the Oklahoma Experiment Station. Incidentally, Rogers - also named for the same person - is a parent. Ability to tolerate heavy infestations of greenbugs is a principal advantage of the new variety. Other advantages include ability to withstand cold winters and produce high yields. In Oklahoma tests, the winter survival rate of Will averaged 25 to 30 percent greater than that of Rogers or Harbine, the two most widely grown varieties. In yield, Will has exceeded these two by from 4.8 bushels in eastern Oklahoma to 11.5 bushels in the southwestern part of the State. Will stands well, matures about the same time as Harbine and Rogers and averages one to two inches taller. In test weight it equals Harbine but not Rogers. A minor weakness is its smaller seed size - which is characteristic of the other varieties mentioned. However, this has not been a serious problem. Foundation seed is being distributed to certified seed growers this fall with the expectation there will be certified seed available for 1964 planting.

Besbar is a six-rowed, awnleted winter barley, similar in appearance to Wong. It is stiff strawed, with lodging resistance slightly greater than Wong and even approaching Hudson in this respect. The new variety exceeds Wong in winterhardiness, approximating Hudson in this characteristic. In maturity, it is one to two days better than Wong. Under Massachusetts conditions it is more resistant to stripe and mildew than Wong and is more tolerant of scald. Grain characteristics are similar to Wong. Besbar is a natural hybrid (Wong x unknown), originally selected from a heavily winter-injured population of Wong barley in 1954. Besbar was developed by T. K. Bepalon; Eastern States Farmers' Exchange at its Crop Research Center, Feeding Hills, Massachusetts. It is suggested as a replacement for Wong and Hudson in a belt from eastern Ohio through Pennsylvania and southern New England.

Rice

Palmyra is a medium-grain rice with early maturity and high yield. It and Missouri R-500, which it will likely replace, are regarded as the only medium grain varieties that will mature safely in Northern Missouri. In 6-year tests there, Palmyra yielded 93.8 and R-500 89.9 bushels per acre. This variety was developed jointly by the Missouri and California Experiment Stations and ARS. Palmyra stems from a cross of Caloro and Blue Rose made at the Rice Experiment Station in Biggs, California. It has been undergoing reselection in Missouri since 1949.

Nova (C.I. 9459) is a selection from Lacrosse x Zenith-Nira, released jointly by the Arkansas Agricultural Experiment Station and ARS. It is a smooth-hulled, medium-grain rice with slightly yellowish hull. Average maturity is 127 days. Medium height and moderate straw strength. Nova is resistant to hoja blanca and has shown a high degree of resistance to rotten-neck blast. It has good processing and cooking qualities.

Vegold (C.I. 9386) selected from Hill selection x (Texas Patna x Rexoro-Supreme Blue Rose). Released jointly by the Arkansas Agricultural Experiment Station and ARS-USDA. Vegold is a long-grain rice with gold colored smooth hulls. Very short season variety. Average maturity 116 days. Moderate straw strength and medium height. Cooking and processing qualities good.

Grain Sorghum Hybrids

RS 617 is a brown seeded, combine height sorghum hybrid announced by the Mississippi Experiment Station. Resistance to bird and weather damage were major objectives in its development. Tests show that these have been achieved in high degree. During the testing period 1956-1960, RS 617 ranked first among 25 adopted hybrids every year. It is the F₁ hybrid of cytoplasmic male-sterile combine Kafir 60 and Mp 10, a strain of dwarf early Shallu developed by the Texas Experiment Station. Germ plasm quantities of Mp 10 are available through the Mississippi Experiment Station Foundation Seed Stocks program, but seed of the hybrid is not. Production of hybrid seed on a field scale has been very difficult in Mississippi since, unlike the progeny, neither parent is resistant to bird and weather damage.

AKS 614 (Redlan A x AK 3001r) - An Arkansas release, is a combine type hybrid grain sorghum with relatively high grain yields and a high degree of resistance to birds and to weathering. The seed is brown, the head is open. This hybrid has been under test since 1957.

RS 616, RS 621, RS 622, RS 623 - Are 3-dwarf x 4-dwarf hybrids developed by the Texas Experiment Station in cooperation with USDA. Excellent resistance to root lodging during a 1960 storm led to extensive testing of these hybrids both statewide and regionally. They have shown good resistance also to weak neck and stalk-rot lodging. Yields of the four hybrids compare favorably with those of RS 608 and RS 610 in Texas tests. But 1961 tests in other States indicate they are not as widely adapted as RS 610. In short season and low rainfall areas, yields were relatively poor because of later maturity. Certified seed is available in Texas.

Soybeans

Clark 63, Harosoy 63, Hawkeye 63, and Lindarin 63 - These are new soybean varieties actually, each representing an established commercial variety modified by backcrossing to add resistance to phytophthora rot. And in the case of Clark 63 resistance also to bacterial pustule leafspot is added. Retention of the original variety names is intended to indicate similarity to the original variety with the number (the year of release) denoting disease resistance. Experiment Stations in 12 North Central States and Ontario, together with USDA joined in the development. Seed for 1964 planting is being increased in the following States:

Hawkeye 63 - Illinois, Indiana and South Dakota;
Clark 63 - Illinois, Iowa, Kansas, Missouri, Ohio and Indiana;
Harosoy 63 - Illinois, Indiana, Michigan, Missouri, Ohio, South Dakota, Wisconsin and Ontario;
Lindarin 63 - Ohio, Indiana and Wisconsin.

Hardee was selected at the Florida Experiment Station from a cross made at Stoneville, Mississippi in cooperation with USDA. Late maturity, high yield, disease and shattering resistance are characteristics. In Georgia where release of the variety was reported, Hardee is expected to replace Jackson and Yelnanda. Hardee was released also in Florida and South Carolina.

Delmar was released by the Delaware and Maryland Experiment Stations where it was developed jointly with USDA. In Delaware, Delmar is expected to replace Bethel in view of its improved quality and resistance to shattering. (See "Recent Releases of New Varieties No. 3", April 1961, for description of Bethel).

Bossier and Curtis are varieties of soybeans released by the Louisiana Experiment Station. Both resulted from selections made from the Lee variety in 1956. Bossier has been somewhat superior to Lee in yield tests, is equal in oil-protein content and appears to be about the same in disease resistance. It is a bushier plant than Lee, a few inches taller, and matures about seven days later. The variety is shatter resistant. Seed are a glossy yellow with a dark brown hilum. The Curtis variety is similar to Lee in yields and in oil and protein contents, but matures about seven days earlier. Plants of Curtis are bushier, some 30 to 36 inches tall and set beans about six inches above the ground. Seed are creamy pearl, have a light brown to colorless hilum and are slightly smaller than Lee. Curtis is also shatter resistant. Seed of both varieties is being increased in Louisiana.

Alfalfa

Progress (CL-10) was developed by Caladino Farm Seeds, Inc., of Willows, California by selecting 19 clones from the variety Vernal on the basis of high seed yield, number of flowers per raceme, pollen production, and self-fertility. The combination was tested for forage yield in the Midwest and for seed yields in California. It is believed to be adapted to the Vernal-Ranger alfalfa area.

Flowers are predominantly purple with only 1-2% yellow. Type of growth and foliage color are similar to Vernal. It is wilt resistant and equal to Ranger in winterhardiness. Seed yields of parental clones have been considerably above Vernal.

WL 202 was developed by the Waterman-Loomis Company of Bakersfield, California. It is a 33-clone synthetic comprised of 31 plant selections from Vernal and two from Narragansett. The 33 parent clones were chosen from 500 Vernal and 100 Narragansett selections made in 1957 following a heavy spotted aphid attack in Kern County, California. The original selections were based upon minimum damage by the spotted aphid, leafiness, plant color, plant size and vigor, and yield of seed. After 2 years of forage evaluation of the outcrossed progenies in Illinois and Michigan, the 33 selected clones were recombined by natural cross pollination and tested under the number 202. It is adapted to the Ranger-Vernal alfalfa area.

Flowers are predominantly purple with 10-15% yellow and blue variegated. Foliage is dark green, glabrous to light pubescence. It is winterhardy, has better fall leaf color than Ranger and larger leaves than Vernal. It is resistant to bacterial wilt, and tolerant to leaf hopper and the spotted aphid.

Sonora is a spotted aphid resistant variety, developed by experiment stations of Arizona, California and Nevada and USDA. It is the product of 13 parent clones. Sonora is adapted to the desert valley areas in these States where high winter forage production is important. Compared to Moapa, Sonora is superior in seedling vigor and winter yields, and does as well during the rest of the year. It is equal in resistance to aphids and less susceptible than Moapa to downy mildew fungus. It may however be less persistent than Moapa. Presently, it is recommended where 2 to 3-year stands are wanted. Limited supplies of certified seed should be available by the fall of 1963 through the Crop Improvement Associations of Arizona and California.

Cayuga alfalfa is a synthetic composed of 10 clones developed by Cornell University and released in 1961. It is winter hardy, resistant to bacterial wilt, relatively tolerant to the common foliage diseases of the area, and has dark green leaves. It is relatively fine stemmed but upright in growth habit. The flower color is predominantly bluish-purple with a considerable variation in intensity. Cayuga exhibits early spring growth and recovers rapidly after cutting. It is intermediate for these characteristics between Ranger and the Flamande strains, such as Du Puits. New York workers also state that the variety is well adapted for use on productive alfalfa soils to give persistent stands under frequent harvest management. Certified seed was first produced in 1961.

Alfalfa (Cont.)

Cherokee alfalfa was developed jointly by the North Carolina Agricultural Experiment Station and the Crops Research Division, Agricultural Research Service, USDA, and released in 1961. It was developed by seven cycles of recurrent phenotypic selection for disease and insect resistance and general adaptation to North Carolina. In North Carolina, Cherokee yielded approximately 10 percent more than Atlantic and Williamsburg. In addition, it has resistance to alfalfa rust, and more tolerance to potato leafhopper yellowing, certain leafspots and crown and stem rots than Atlantic or Williamsburg. Cherokee is more persistent than varieties commonly grown in North Carolina. It is susceptible to bacterial wilt. Cherokee is expected to be adapted to most of the alfalfa growing area of the southeastern United States. Certified seed production was begun in 1962.

The variety 525 was developed by the Arnold-Thomas Seed Service and Pioneer Hi-Bred Corn Company and placed in commercial seed channels in 1962. It is a synthetic consisting of 22 clones selected from 5,000 spaced plants of Vernal for bloom, seed, and growth characteristics. According to the developers, the new variety is a winterhardy alfalfa with a fall growth pattern between that of Ranger and Vernal. Growth habit is semierect to erect. The variety tends to be somewhat more vigorous in midsummer than Vernal or Ranger and recovers after clipping slightly more rapidly than Vernal. Some of the parental clones are resistant to the spotted alfalfa aphid, and nearly all of them are resistant to bacterial wilt. Reaction of the variety to the potato leafhopper is similar to that of Vernal. The probably area of adaptation of 525 appears to be similar to that of Ranger and Vernal.

White Clover

Regal, a new five-clone synthetic variety of Ladino white clover, was released by the Alabama Experiment Station in January 1962. Regal is more productive and more persistent in Alabama than any commercially available white clover. Breeder's seed will be produced in Alabama under artificial lights; foundation and certified seed will be produced in the Ladino clover seed area of the West. Seed should be available by the fall of 1963.

White Clover (cont.)

Espanso is the product of an experiment station at Lodi, Italy. Single plants selected from locally adapted types were subjected to rigorous arid conditions after which surviving plants were reselected for desired characteristics. The variety appears to have improved winter and drought tolerance together with good persistence. Though not uniform in appearance, Espanso is generally taller, more upright in growth and has larger leaves, blossoms and stolons than California certified Ladino white clover. The Calapproved Seed Growers Association has the exclusive franchise for production and distribution of this variety in the United States and Canada.

Sweet Clover

Cumino is a low coumarin, non-bitter, white-flowered, biennial sweetclover (Melilotus alba), developed at the Dominion Forage Crops Laboratory, Saskatoon, Saskatchewan, Canada. Seedling year plants are more upright than Arctic; second year plants resemble Arctic in shape and size. Maturity is about the same as for Arctic, and from 7 to 10 days later than Erector. Winterhardiness, disease resistance, and forage and seed yields are comparable to Erector and Arctic. Cumino is expected to replace Erector and Arctic in Canada but has not been as productive in the Northern Great Plains of the United States as U.S. varieties. The suggested seed source is Canada Agricultural Experiment Station, Forage Crops Section, Saskatoon, Saskatchewan, Canada.

Arrowleaf Clover

Amclo is the name given a new arrowleaf clover, a winter annual introduced from Italy by Southern Region Plant Introduction Station and now released by the Georgia Experiment Station and USDA. In tests there the past three years, its dry matter yields have averaged 7700 pounds per acre compared to 2300 pounds for crimson clover. While similar to crimson clover in winter growth, its growing period extends longer into the spring. This, it is suggested, may be responsible for its extra yield. Cows graze Amclo readily. It is reported to make excellent hay. Given the chance, Amclo will reseed itself and the seed crop combines well. Seed is being increased by Foundation Seeds, Inc. of Athens, Georgia for distribution by Georgia Crop Improvement Association.

Red Clover

Orbit is a mildew-resistant variety of red clover released by the Mississippi Experiment Station in 1961. Developed from Kenland by recurrent selection it is comparable or superior to its parent for forage yields in Mississippi. Orbit appears to be finer stemmed than other strains and produces quality hay, free of mildew spores. It is not adapted to the northern portions of the Kenland belt. Inquiries about seed may be addressed to Foundation Seed Stocks, Box 97, State College, Mississippi.

Red Clover (Cont.)

Tensas (pronounced "Tensaw") red clover was released by the Louisiana Experiment Station in 1961 and was so named because the original seed stocks for this new variety were collected from a volunteer stand of red clover in the Tensas river bottom in Louisiana. Tensas is about 2 weeks earlier in maturity in Louisiana than is Kenland, and is more reliable for seed production. It is recommended for heavier soils in Louisiana. Tensas has resistance to mildew and produces higher yields of forage. Its adaptation is probably confined to the Gulf Coast States from Southeast Texas to Florida, as Tensas lacks winterhardiness.

Lespedeza

Summit, a new variety of Korean lespedeza, was released jointly by the Arkansas and Missouri Experiment Stations and USDA. It was selected from a 1952 cross between Climax and Harbin. At both stations it has outyielded Korean by 32 to 35% in forage. It outyielded Korean in seed by 21% in Missouri and 62% in Arkansas. Compared with Climax, Summit was equal in forage yield at both locations and superior to Climax in seed yields at the Missouri Station, and only slightly below in Arkansas. It matures about seven days earlier than Climax and seven days later than Korean. Summit has higher resistance to both tar spot and bacterial wilt than either Korean or Climax.

Sericea Lespedeza

Serala, a new variety of sericea Lespedeza, was developed by the Alabama Agricultural Experiment Station and released in 1962. It is a synthetic variety composed of six lines which had been rather widely evaluated in tests over the State. Serala, in addition to being high yielding, has finer, more pliable or softer stems than common sericea. With advancing maturity, the stems of Serala do not become as coarse and woody as is usually true of this species.

The variety is being increased under the certification program of the Alabama Crop Improvement Association. Foundation seed should be available to growers in 1964 and limited quantities of certified seed in 1965.

Gasyn, released by the Georgia Experiment Station, is more uniform in plant type than common sericea, with less tannin. The plants are shorter, with finer stems, and are more leafy. It is expected to replace the Arlington variety.

Bermudagrass

Tufcote is a medium-leaved, medium dark green bermudagrass, released cooperatively by the Maryland Experiment Station, Crops Research Division of ARS and National Plant Material Center, SCS, USDA. Introduced in 1942 from South Africa, it was the only one of several strains to survive subnormal winter temperatures for the area where released. Other characteristics include tolerance to drought, salt, and in a degree to leaf diseases. While Tufcote will produce seed heads in the Beltsville, Maryland area, vegetative propagation is necessary. Certified planting stock is produced in Maryland.

Arizona Common is not a new variety but is listed here because standards for its certification have just been adopted by Arizona Crop Improvement Association. It is a seeded variety, highly cross-pollinated. This bermudagrass has been produced in Arizona for many years. It is considered adapted to elevations below 4000 feet across the southern part of the United States.

Tall Fescue

Kenmont is a new variety of tall fescue selected at the Kentucky Experiment Station and released for use in Montana by the Montana station. Foundation seed is being produced at the Huntley Branch Station. In Montana, Kenmont is expected to be most widely used as a substitute for Alta in irrigated pastures and areas of high rainfall. In plant type it is described as a tall robust variety, forming large clumps with a reduced tendency to spread.

Lowland Switchgrass

Kanlow (Kansas 2218) is a variety of lowland switchgrass that was selected, developed and tested cooperatively by Kansas Experiment Station and SCS, USDA. Foundation and certified seed are produced in Kansas. Kanlow is especially well adapted to lowlands where flooding, a high water table, or other excess water problems occur. But it performs well on uplands if the soil is not too thin or droughty. It may grow 7 to 8 feet tall with favorable conditions. At earlier stages the stems are succulent - though thick and coarse at maturity - and the leaves, though harsh to the feel, are readily grazed. It produces good yields of relatively small seed, 500,000/lb., compared to 300,000 for upland types. Although its major use may be as a soil conserving and pasture crop, Kanlow may be utilized for hay and possibly silage. It appears to have a wide range of adaptation but seems likely to be most useful in the more humid portions of Nebraska, Kansas, Oklahoma and Missouri.

Rescuegrass

Gasel is a Georgia Experiment Station selection with mildew and smut resistance. It is more uniform than common rescuegrass, with larger stems, wider and longer leaves, and larger, heavier heads. Longer lived than Common, Gasel tends to behave as a perennial.

Veldtgrass

Veldtgrass is a fine-stemmed, densely tufted perennial bunchgrass. Height varies from 12 to 24 inches. Leaf blades are flat, glaucous, often crinkled along part of the margin. Ligule is prominent, membranous, many toothed at the apex. The collar is usually dark red or purple. The variety Mission is readily distinguished from other strains by its much contracted or compact panicle with shorter branches. The seeds are larger, heavier, darker brown in color, and do not readily shatter at maturity.

Mission Veldtgrass was developed by the California Experiment Station and the SCS, from a sample of a non-shattering strain received from the University of Western Australia in 1950. Seventy-seven non-shattering plants were selected from a nursery of approximately 3,000 plants at Davis in 1952. From 1953 to 1961 testing and selection continued - the final combination consists of nine clones. The variety is adapted to light sandy soils in the Central and South Coast regions of California for livestock, game, and to help prevent soil erosion. The nine clones are established at the South Coast Field Station. Certified seed will be produced.

Bluestem

Champ and Pawnee are new varieties of native Bluestem grass developed cooperatively by Nebraska Experiment Station and ARS-USDA. Foundation seed is being maintained by the Nebraska Station. These varieties were developed by the hybridization, selection and testing of wild strains of big and sand bluestem. Both varieties are recommended for regrassing lands removed from grain production. Champ's area of adaptation is the eastern two-thirds of Nebraska, and Pawnee's is the eastern one-third of the State. Champ is rated a moderately late variety; Pawnee is some 7-10 days later in seed maturity.

Sudangrass

Suhi-1 is an F-1 hybrid sudangrass developed by the Georgia Experiment Station. It is tall, vigorous and late maturing, with drought and disease resistance. It is particularly suitable for late forage production. In 4-year tests at four Georgia locations Suhi-1 produced 31 percent more forage than the average of the sudangrasses tested, and 22 percent more than Piper and Tift, the most productive commercial varieties. Seed is being certified by the Georgia Crop Improvement Association.

Field Beans

Charlevolx is a dark red kidney bean resistant to the two races of bean anthracnose found in Michigan where this variety was released jointly by the State Experiment Station and USDA. Its resistance to the beta race of anthracnose accounts particularly for its release. Otherwise Charlevolx is similar to the common dark red kidney bean in plant type and adaptation. Yields are comparable except when the common is adversely affected by anthracnose. Both are susceptible to seed-borne halo and common bacterial blights. Certified seed production was begun in Michigan in 1961.

Gratiot is a mid-season, upright navy bean with good canning quality released jointly by the Michigan Experiment Station and USDA. It is the first of the bush type that successfully combines a full measure of resistance to bean anthracnose and common bean mosaic. Because of its growth habit it tends to escape also white mold. Tests in major producing areas nationally indicate that Gratiot is widely adapted. Seed was made available to Michigan certified seed growers this year. Quantity supplies should be available for 1964 planting.

Red Mexican UI-36 - Developed cooperatively by the University of Idaho and USDA, is similar to the standard Red Mexican UI-34 in yield, seed size and shape. It differs from UI-34 principally in being about two weeks earlier in maturity, with plants more upright; seed coat color is more uniform from seed to seed, somewhat darker red and more attractive. Its earliness materially reduces danger of frost damage. Red Mexican UI-36 is resistant to curly top and to both the "A" strain and the type strain of common bean mosaic.

Red Mexican UI-37 - Compared to UI-34 the plants of UI-37 are short, semi-vining and upright, and three weeks earlier in maturity. The seed of UI-37 is slightly smaller and superior in color to UI-34 but seed uniformity is not improved. Red Mexican UI-37 is resistant to curly top, to the "A" strain and the type strain of common bean mosaic. Its early maturity permits growing UI-37 in certain short season areas in Idaho and thus permits wider selection of varieties. It can be grown in the same areas where Pinto UI-111 and Great Northern 1140 are successfully matured. In yield tests at Twin Falls, Idaho, Red Mexican UI-37 has averaged approximately 300 pounds less per acre than UI-34. But this is not considered excessive considering the advantage of early maturity.

Mungbean

Berken is a large-seeded mungbean developed by the Oklahoma Experiment Station. Seed will be available following 1963 harvest. Advantages of this new variety include seed size, resistance to lodging and to shattering, early and uniform maturity, and high yield. Berken matures 10-20 days ahead of other jumbo types. In six station years of testing at four locations in Oklahoma, yields have compared with leading varieties as follows: Berken - 756 pounds per acre; Kiloga - 705; and Oklahoma 12 - 673 pounds.

Sesame

Calinda is a selection from a Rio and Margo sesame cross made in 1953 by the USDA cooperatively with the Texas Agricultural Experiment Station. In Texas trials it has yielded similarly to Oro, an earlier variety; in California's San Joaquin cotton area its yield has been outstanding. Until further testing is completed, Calinda is recommended only for the California counties of Kern, Kings, Tulare and Fresno. However, in 89 tests in 11 States covering five years, Calinda averaged 974 pounds per acre compared with 883 for Margo. The seed is white, non-bitter, uniform in size and well suited to the needs of the baking and candy industries. The plant is tall and essentially non-branching. Planting seed is being distributed for increase by the California Experiment Station. Certified seed should be available in California in 1964.

Castorbean

Lynn is an early, disease-resistant, dwarf-internode castorbean variety, developed jointly by USDA and Texas Experiment Station. On the Texas High Plains plants average three to four feet and have shown superior wind resistance, ability to withstand weathering after frost, and suitability to mechanical harvesting. Yields in High Plains trials have ranged from 2200-2400 pounds. Lynn has yielded well also in Oklahoma, Kansas and Nebraska trials. Lynn is recommended in Texas generally as an early commercial variety and for late planting in the High Plains. Because it is early, Lynn can be grown in northern reaches of the castorbean area - Nebraska and Kansas. Other attributes include excellent resistance to bacterial and alternaria leaf spots, and good combining ability with available dwarf-internode female lines to produce high yielding first generation hybrids.

Peanuts

Starr is a Spanish peanut with medium size pod and seed. Developed in the cooperative breeding program of Texas Experiment Station and Southwest Peanut Growers' Association, it is a selection from the cross Spantex and P.I. 161317. Its characteristics, briefly described, are: good yielder, threshes clean, early maturity, thicker shells, and adaptation to all of Texas. In Texas tests since 1955, Starr has outyielded Spantex, Argentine and Dixie Spanish by an average of about 10 percent. It has acceptable quality, but in view of processor demands, it is not expected Starr will replace the small Spanish varieties like Spantex. Seed certification was begun in 1961.

Lupine

Weiko III, a yellow lupine variety of German origin, becomes infected with virus when grown in the Southeastern States. A high incidence of virus in seed fields greatly reduces seed yields. Methods have been developed for producing virus-free seed and a virus-free seed stock has been released to growers by the USDA and the Georgia Agricultural Experiment Station. It is a white-seeded, non-shattering, sweet, soft-seeded variety.

